

PROFILING METHOD

Jaime Poris

Claudio-L. Rampoldi

5

ABSTRACT

A profiling method compensates for phase changes associated with the presence of multiple or varying material in the area to be measured. The profiling method measures at least a portion of the height profile of the area of interest. The phase of the different materials in the region are also obtained and used to generate a correction factor. Depending on the type of material in the region of interest, the correction factor may be the material specific phase difference of the materials in the region, e.g., when at least one of the materials is opaque to the wavelength of light used to measure the height profile, or the relationship between the thickness and phase of the material for a desired thickness range, e.g., when one or more of the materials is transparent to the wavelengths used to measure the height profile. The correction factor is then used to correct and/or convert the measured phase profile to an actual height profile. Accordingly, an accurate height profile may be obtained for regions that include dishing, erosion, or that contain various types of materials.

20